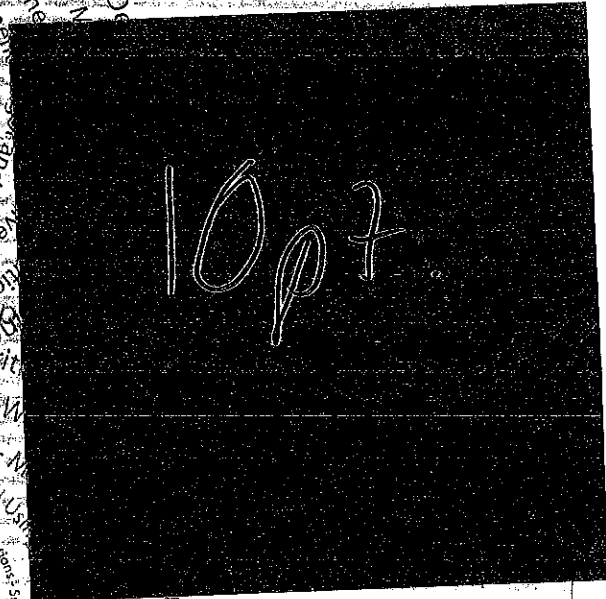


TBT mtg. w/ Deb Kennedy

Prof. Dev.

1/7/15

# Active Learning and Engagement Strategies



Paula Rutherford

# Graffiti

## Purposes

- To gather pre-assessment data
- To access prior knowledge
- To have students summarize their learning
- To build in movement
- To promote critical thinking

## Process

- Write problems, formulas, sentences to be translated, or ideas to brainstorm on pieces of large chart paper and post around the room. Students move in small groups from chart to chart.
- Each group works on a different question, topic, issue, or statement related to the concept being studied and writes responses or "graffiti" which can be short words, phrases, or graphics on their chart paper.
- After the allotted time period, have the students move to the next chart.
- Repeat the process until all groups have reacted to all charts.
- Have students do a **Walking Tour** of the completed charts and then react to the statements or topics, identify patterns, and/or make predictions based on what is written/drawn on the charts.

## Variations

- Give each piece of chart paper to a group of three or four. Students work at their tables and the charts move from table to table. Kathy Anderson of New Trier High School, Winnetka, Illinois, calls this version **Ready...Rotate**.
- This strategy can be used any time during a lesson or unit. At the beginning you and your students can find out what they already know and can do; in the middle it is a useful way for you and them to check on their learning. At the end of study, it can serve as a great review for an exam or even for predicting what might be on the exam.
- Have individuals or groups use different color markers to track contributions.

# Graffiti Exemplars

## Chemical Graffiti

- Divide students into groups of 3 or 4.
- Place 5 or 6 multi-process chemical problems on separate sheets of paper. Post the charts around the room or spread problems around the table. Each group will eventually work each of the problems.
- Have each group work on a problem for 90 seconds and then rotate clockwise to the next problem on the cue.
- When a group comes to a new problem, the students check the work of the previous group, make any needed changes, and continue with the problem.
- Have students initial all work and final answers they believe to be correct.
- Students may cycle through problems 2 or 3 times as appropriate.
- As appropriate, use the completed problems to review the concepts under study.

**Tim Taylor, Jennings County High School, North Vernon, Indiana**

## Amazing Adjectives Graffiti

Students essentially created their own **Word Wall** with this exercise.

- I posted five pieces of chart paper with one of the following five words in the center of each: **Water, Apple, House, Dog, and Alien.**
- I had the students then move around the room in small groups and write adjectives that might be used to describe each noun.

Results included:

- **For water:** cool, clear, icy, cold, hot, bubbling, dirty, cloudy, fast, meandering, blue, shimmering, beautiful, muddy, deep
- **For dog:** big, small, brown, black, friendly, gruff, aggressive, scary, loud, quiet, happy, sad, grumpy, wild, sleek, funny, gross, hungry

**A teacher from the International School of Beijing, Beijing, China**

## **Student-Led Book Discussions Literature Circles**

Harvey Daniels created Literature Circles as a way for students to lead and participate in small group discussions about books of their choice. He suggests that beginning groups use role assignments like those described below.

### **Discussion Director**

Develop a list of questions for your group to discuss. Focus on the big ideas of the reading and on sharing your reactions to the text. The best questions come from your own thoughts, feelings, and concerns.

### **Connector**

Make connections between the readings and your life beyond this assignment. You might focus on other classes, life beyond the school day, or other readings you have studied. Record any connections you make between this reading and other parts of your life.

### **Passage Master**

Identify the most powerful, interesting, humorous, puzzling passages in the assigned reading. During the discussion, you decide how and when to have the segments brought to the attention of the group. You may decide to read them aloud, you may ask someone else to read a segment aloud, or you may decide to have all group members read the selection silently and then discuss its significance.

### **Illustrator**

Draw, sketch, or find a visual that captures the essence of the assigned reading or of something you thought about as you read. Use your own artistic skills, graphics, visuals from the Internet, or your photo or magazine collection to identify visual images that help paint a picture about the reading. You can explain how the visual works for you or ask group members to speculate on how the visual fits with the reading.

### **Summarizer**

Prepare a two to three minute summary of not only the reading, but the discussion of that reading. You may ask group members to add to the points you make via a **3-2-1** summary or a reflective journal entry.

Visit [www.literaturecircles.com](http://www.literaturecircles.com) for extensive information on organizing student-led discussion groups.

# **Mental Imagery**

## **Pictures in Your Mind's Eye**

### **The Power of Mental Imagery**

Marzano reviews the literature and writes about the power of nonlinguistic representations. He includes the following learning experiences as examples of nonlinguistic representations:

- Generating mental pictures
- Creating graphic representations
- Making physical models
- Drawing pictures and pictographs
- Engaging in kinesthetic activity

Zimmerman and Hutchins list creating mental images as one of the seven keys to comprehension and Davey lists the lack of mental image formation as one of the habits of unsuccessful readers.

### **Leveling the Playing Field**

Prior knowledge and life experiences greatly influence the mental pictures we create. Our task as teachers is to figure out how to build in our learners the capacity to visualize as they read and listen. We face a huge challenge with readers who are still struggling with decoding text and are therefore handicapped in their capacity to form mental images while reading. It is essential that we explicitly model forming visual images and monitor our students' use of this practice to aid in comprehension.

### **Instructional Process**

- Explain that just as successful athletes form mental images of what a successful performance looks like, successful readers form mental images when they read.
- Introduce the process with short segments of highly descriptive text. As students become skilled at forming mental images, introduce more complex texts as well as expository texts that have students form mental images about abstract concepts and ideas, very large or small objects, and life in other lands or times.
- While reading text aloud, do a think aloud explaining the mental images you are seeing.
- Allow students to ask questions about what you are seeing.
- Have students describe their own mental images and encourage different perspectives.
- Have students draw their mental pictures and share them with classmates.
- A great tool called a Draw Aloud Organizer is available at [http://rwtverio.ncte.org/lesson\\_images/lesson792/draw2.pdf](http://rwtverio.ncte.org/lesson_images/lesson792/draw2.pdf).

# Sort Cards

## Purposes

- To gather pre-assessment data
- To check for understanding
- To review
- To access prior knowledge
- To develop selected thinking skills

## Process

- Students, working individually, generate words and short phrases that come to mind when they think of a designated topic. They record each idea on a separate index card.
- Working in small groups, students:
  - share ideas
  - clarify similar ideas
  - eliminate duplicates
- Students sort the ideas of the group into categories. The categories can be created by the students or the teacher can identify categories for student use.
- When the sorting and labeling is completed, the students take a tour around the room to observe and analyze the work of other groups. One student stays behind at the base table to answer questions.
- Groups return to tables to discuss what they observed and to revise or add new ideas/categories.
- Groups use the generated ideas and categories as a basis of future study or discussion.
- Ask students to do meta-cognitive processing; that is, have them process how they went about their thinking as they generated, sorted, categorized, labeled, and analyzed the work of others.

## Sort Card Possibilities

Give each student a set of index cards with the key ideas, vocabulary terms, events, etc., recorded on them or have the students create their own cards. They could use the cards they generated at the beginning of the lesson. They could sort them again based on new learning and/or identify which important words are missing. Students could also use the cards for **Tic-Tac-Toe** as described on page 109.

This pack of index cards can work miracles in helping you and your students know who knows what! Students use the cards to "sort" their learning. Some possibilities include:

# Sort Cards

- sequencing historical events or scientific processes
- categorizing
- sorting to determine priorities
  - I know, I sort of know, and I haven't a clue piles to focus study
  - Important, somewhat important, and not important piles to decide how to proceed

## Sort Cards Assessment Exemplar The World of Plants

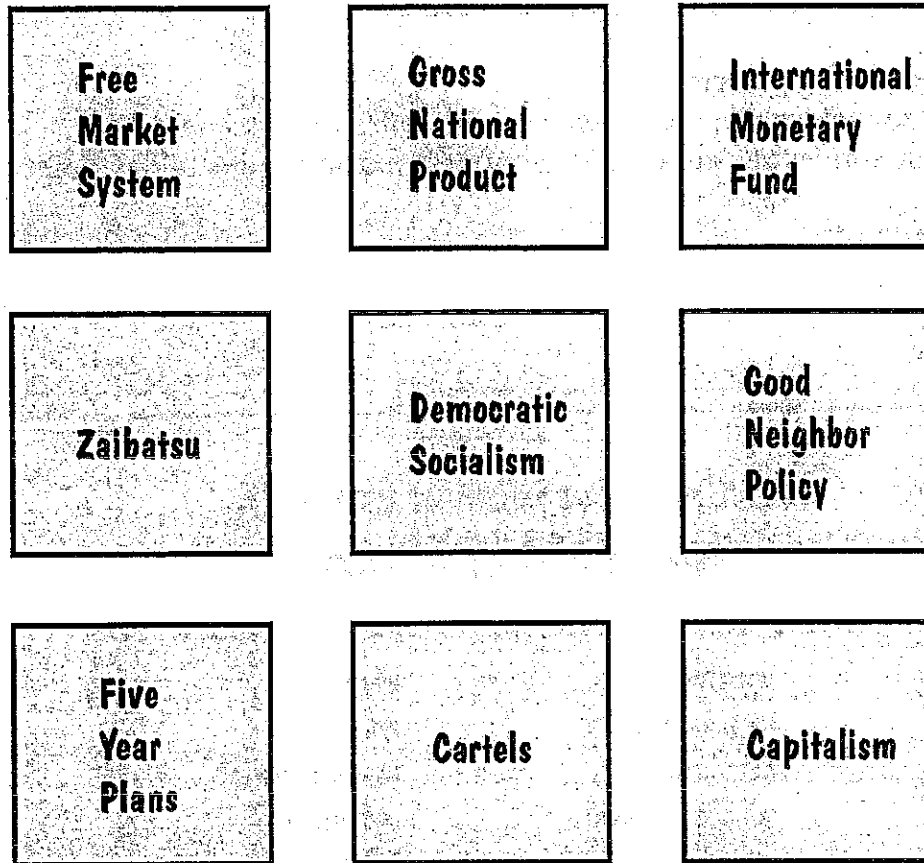
Julie Wenzloff gave her students these words on 2" x 4" slips of paper:

cold	needles	wind
harsh	alternate leaves	animals
permafrost	deciduous	opposite leaves
destruction	whorled leaves	succulents
extinction	water	birds
tundra	nonseed plant	mosses
frozen	ferns	conifers
deforestation	simple leaves	seed plant
peril	liverworts	horsetails
pollution	monocots	compound leaves

The students were asked to sort the cards into two categories. The assessment on **The World of Plants** required students to label the two lists of words and then to write a rationale for why the words were placed as they were placed. This approach matches the "list-group-label" steps that are the first phase of Hilda Taba's model. The teacher's addition of having students give the rationale for the grouping causes students to think about their thinking and communicate it in writing.

Julie Wenzloff, Farmington Elementary School, Kewaskum, Wisconsin

# Tic-Tac-Toe



## Purposes

- To have students go beyond memorizing definitions and to look for patterns and connections embedded in the vocabulary words and concepts being studied
- To promote dialogue and debate

## Process

- Place, or have students place, vocabulary words or important concepts on index cards.
- Give each student or group a set of cards.
- Have students shuffle their cards and deal out nine cards in a 3x3 format.
- Ask students to form eight sentences each, including the three words straight across in a row, straight down in a column, or on the diagonals.
- Have the students or groups share the sentences that capture important connections, or "misconnections," between words and concepts being studied.

## Wonderful World of Words

This section of the book focuses on a wide array of strategies for promoting vocabulary development. Some of them are explained in detail earlier in the book and page references are provided in this section. The strategies discussed here are applicable for use in classrooms across the K-12 spectrum.

Looking words up in a dictionary or a glossary and writing down the definition even when followed by using the word in a sentence does not always do the trick! Students need to work with the words in context and in connection with other words they already know and use. They need to do so in a way that promotes **mastery** (the capacity to use the word in both their receptive and expressive language), **retention** (the capacity to use the word over time), and **transfer** (the capacity to use the word appropriately in other contexts). Many educators call this **word study**.

Graves and Slater, in *Content Area Reading and Learning*, identify six levels of vocabulary development. While looking up a word in a dictionary or glossary may be appropriate for some of them, it is not the best approach most of the time. When you identify vocabulary words to preteach or to emphasize during teaching, consider the relationship the students already have with the word when selecting the instructional strategy. The levels are:

- Learning to read words already in oral vocabulary
- Learning new meanings (content specific) for known words
- Learning new words for known concepts
- Learning new words representing new concepts
- Clarifying and enriching meanings of known words
- Using words currently in the students' receptive vocabulary (listening and reading) in their expressive or productive vocabulary (speaking and writing)


# Wonderful World of Words

## Frayer Model

(Frederick Frayer and Herbert Klausmeier)

This visual organizer is a recommended approach for learning and reviewing new words for new concepts. It helps learners build skillfulness at crafting rich definitions of concepts and vocabulary words. To accommodate young students and English language learners, definitions, examples and non-examples can be written or drawn.

<b>Essential Attributes</b> All have...	<b>Non-Essential Attributes</b> Some have, some do not have...	<b>Definition</b> A solid made of atoms arranged in an ordered pattern	<b>Characteristics</b> glassy, clear, colorless colored, evenly shaped, patterned
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Concept/ Vocabulary Word</b> </div>		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> <b>Crystals</b> </div>	
These are...	These are not...	metals, rocks snowflakes salt, and diamonds	coal, pepper, lava, and obsidian
<b>Examples</b>	<b>Non-Examples</b>	<b>Examples</b>	<b>Non-Examples</b>

<b>Definition</b> Equivalent fractions are fractions that represent the same part of the whole or group.	<table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <math>\frac{1}{2} = \frac{3}{6}</math>   <math>\frac{3}{4} = \frac{6}{8}</math> </td> <td style="width: 50%; text-align: center;"> <math>\frac{1}{2} \neq \frac{3}{4}</math>   <math>\frac{3}{4} \neq \frac{7}{8}</math> </td> </tr> </table>	$\frac{1}{2} = \frac{3}{6}$  $\frac{3}{4} = \frac{6}{8}$	$\frac{1}{2} \neq \frac{3}{4}$  $\frac{3}{4} \neq \frac{7}{8}$
$\frac{1}{2} = \frac{3}{6}$  $\frac{3}{4} = \frac{6}{8}$	$\frac{1}{2} \neq \frac{3}{4}$  $\frac{3}{4} \neq \frac{7}{8}$		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Equivalent Fractions</b> </div>			
<div style="text-align: center;">   <math>\frac{1}{2} = \frac{3}{6}</math> </div> <p style="text-align: center;"><b>Visual and Numeric Representation</b></p>	<p>Suzy got <math>\frac{5}{8}</math> of her number facts correct. Jim said that Suzy got half of them correct. Do you agree with Jim? Why or why not?</p> <p style="text-align: center;"><b>Word Problem</b></p>		

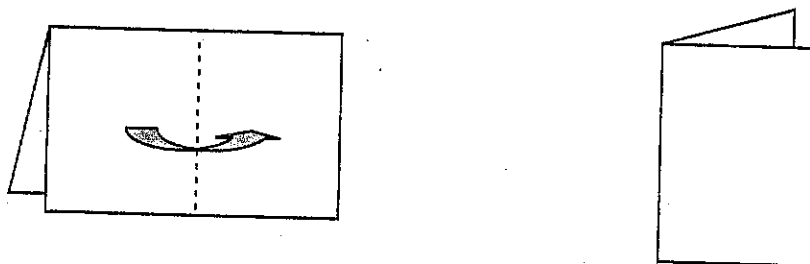
Frayer Model templates are available online.

# Folded Frayer Model

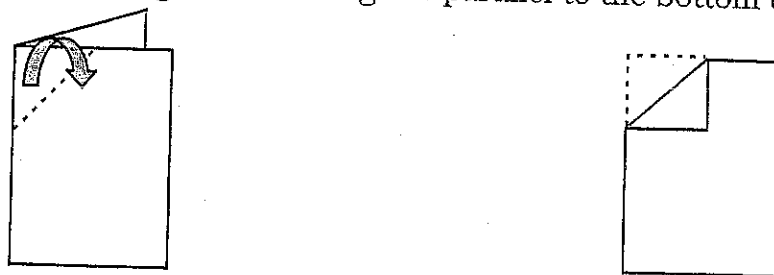
**1st** Fold a sheet of 8 ½ x 11 inch paper in half horizontally.



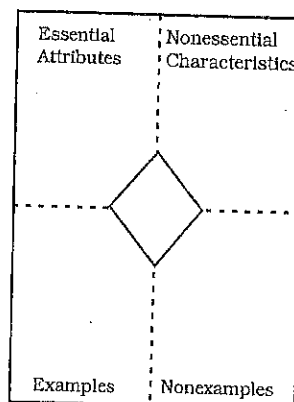
**2nd** Fold the paper in half vertically to create 4 sections.



**3rd** Fold a right triangle on the corner where all the folds meet. Be sure that the bottom edge of the triangle is parallel to the bottom edge of the paper.



**4th** Open the paper flat. Place the vocabulary work or concept to be studied in the diamond-shaped space in the center. Label the four large sections using the terms normally used on the **Frayer Model** or as directed by your teacher.



Frayer Model templates are available online.

# Wonderful World of Words

## Six-Step Process

(Robert Marzano)

**Explain:** In this step, the teacher gives a student-friendly, relevant, and perhaps humorous, description, explanation, or example of a new term. The explanation can be enhanced by pictures, computer images, mental images, and stories.

**Restate:** Next, students generate their own definition and consider how the term relates to their own life experiences. They should share their definition with a learning buddy or with their table group and discuss the similarities and differences. Students often keep a vocabulary notebook, a collection of vocabulary cards, or include their vocabulary work in their interactive notebooks.

**Show:** Students generate a visual to capture the essence of their current understanding of the term. This visual might be a picture, a symbol, or a graphic organizer. Depending on time and resources, computer graphics could be accessed and/or created. If the term represents an abstract concept, provide multiple exemplars or other scaffolding.

Have students complete the first three steps when a term is first introduced. They will have multiple opportunities to revise both their explanations and their visuals in the next three steps which are spaced over time.

**Discuss:** This step uses the principle of learning, cumulative review, in that students revisit terms they have previously studied. Too often we have students study vocabulary or spelling words for a week, do multiple exercises with the terms, and take a test on Friday. We all know that two weeks later we have often forgotten the word. This step spirals the study of the terms throughout the year and asks students to find the words in context both inside and outside of school. Because 75% of our learners are talk processors, the opportunity to use and discuss the terms over time promotes their learning.

**Refine and Reflect:** If students are expected to repeatedly use the terms in complete sentences and use them to frame questions about their learning, their ownership of the terms increases significantly.

**Engage in Learning Games:** This final step is designed to have students “play” with vocabulary. The commercial and student-made learning game possibilities are limitless. Be sure to collect some of the student-generated games for use in future years. These games make excellent learning centers.